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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,499	04/19/2004	Heinrich Friederich	00635.0371-US-01	3463
22865	7590	10/12/2004	EXAMINER	
ALTERA LAW GROUP, LLC 6500 CITY WEST PARKWAY SUITE 100 MINNEAPOLIS, MN 55344-7704			REESE, DAVID C	
			ART UNIT	PAPER NUMBER
			3677	

DATE MAILED: 10/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/827,499

Applicant(s)

FRIEDERICH ET AL.

Examiner

David C. Reese

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Preliminary amendment filed on April 19, 2004; purpose of which to correct abstract language and multiple dependent claims. Application in its entirety is pending.

Information Disclosure Statement

The information disclosure statement filed April 19, 2004 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the reference provided does not address in any sense the nature of the pending invention. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Claim Objections

Claim 1 is objected to because of the following informalities: the use of the word "it". The use of the word "it" is not clear, as one cannot discern proper designation of that term within the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, specifically stemming from the use of the word, "optionally."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Gustafson, U.S. Patent 2,226,491.

In Claim 1, Gustafson discloses a self-locking screw, bolt, or nut comprising of a screw element with a tool engagement means (6 shown in Fig. 1) and a spring element (7) which is formed on the screw element in one piece in coaxial relationship with the screw axis (vertical line through 2) and which with its free edge defines a work-piece contact plane which is perpendicular to the screw axis and which is at an axial spacing from the screw element (2), wherein the spring element (7) is mounted at the periphery of the screw element, that is to say a screw head (1) or a screw nut, it projects radially beyond the periphery and "it" forms a workpiece contact means (7) which is disposed outside the periphery and which is in concentric relationship with the screw axis (vertical line through 2)

In Claim 2, Gustafson continues with a screw element wherein the spring element (7) is a ring which is concentric with respect to the screw axis (vertical line through 2) and which has a workpiece contact means (7), which is annular throughout.

In Claim 3, Gustafson teaches of a screw element, wherein the ring forming the spring element (7) has a plurality of openings (5) distributed uniformly over its periphery.

In Claim 4, Gustafson further shows a screw element wherein the spring element (7) comprises a plurality of radial, claw-like projections (7) which each have at least a respective portion of the workpiece contact means (7).

In Claim 5, Gustafson reveals a screw element wherein three projections (7) are arranged uniformly at the periphery of the screw element (2).

Lastly, in Claim 6, Gustafson teaches of a screw element wherein the spring element (7) has a relatively flat spring characteristic.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gustafson in view of eFunda (Objectives of Heat Treatment, 2001, NPL).

In Claim 7, Gustafson discloses a screw element with a spring element as relied upon in Claims 1-6 above. Gustafson does not teach that the spring element (7) is of lower hardness than the screw element (2). However, eFunda teaches the objectives of

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heat treatments and how it may be pertinent to alter the mechanical properties of an entity without changing the products shape. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the invention of Gustafson, by utilizing the selective heat treatment of eFunda, to create a spring element with a lower level of hardness than the screw element. This type of application is pertinent as to allow an optimum relationship between the screw element, spring element, and the workpiece. Also, one can realize the need for a spring element to be more flexible for the contact means of the workpiece; as the more rigid structure of the screw element provides the screw with a concrete placement within the workpiece.

Continuing with Claims 8-10, in Claim 8, Gustafson reveals a screw element wherein the spring element (7) has projections (5,7) in the region of the workpiece contact means (7).

In Claim 9, Gustafson makes known a screw (2) having a head (1) in the form of the screw element wherein it is of a thread-forming and "optionally" self-boring nature.

Lastly, in Claim 10, Gustafson discloses a screw connection between two workpieces of which at least one is a metal plate or a plastic element, with a screw element wherein only the spring element and it bears with a predetermined prestressing force against the adjoining workpiece (7).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Barth, U.S. Patent 4,516,893; Antoine et al, U.S. Patent 6,227,784; Knohl, U.S. Patent 2,833,326; Bettini et al, U.S. Patent 4,460,300; Schneide,

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U.S. Patent 5,797,175; Heimovics, U.S. Patent 3,241,422; Hsiao, U.S. Patent 6,302,629; Wagner, U.S. Patent 4,193,434; Knocke, U.S. Patent 3,056,443; Bondarowiz et al, U.S. Patent 6,176,665.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Reese whose telephone number is 703-305-4805. The examiner can normally be reached on Monday-Friday 7:30am –5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached at 703-306-4115.



David Reese
Assistant Examiner
Art Unit 3677

September 28, 2004



ROBERT J. SANDY
PRIMARY EXAMINER